Fitness Trail

how to:

- *build the trail*
- *sign the trail*
- *use the trail*

November 1977

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
WO

REPLY TO: 7120 Equipment Development and Testing September 15, 1977

SUBJECT: ED&T 2686 - Physical Fitness Training Program (Fitness Trail)

TO: Regional Foresters

Enclosed are sufficient copies for Ranger District distribution of a special report on the "Fitness Trail." The fitness trail concept was developed at the Missoula Equipment Development Center in response to field requests.

The installation and use of a fitness trail can result in an interesting, low risk form of exercise. Because the course can be used within each individual's capability, it is useful as a supplemental form of exercise for the physically active as well as the principal form of exercise for those who are physically inactive. The trail could provide an excellent opportunity for exercise by individuals who will or may be called upon to perform fireline duties. There is overwhelming evidence that a reasonable level of physical fitness contributes positively to an individual's work performance as well as their general sense of well-being and enjoyment of non-duty hours.

The various human resource programs may provide a source of labor for installation of fitness trails. Some community service clubs have expressed interest in this program.

Questions regarding the construction of a trail should be directed to Art Jukkala at MEDC.

Henry W. De Bruin

HENRY W. DeBRUIN
Director of Aviation and Fire Management

LIMITED DISTRIBUTION

Fitness Trail

How to
- Build the Trail,
- Sign the Trail,
- Use the Trail

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NOVEMBER 1977

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The Fitness Trail concept described here is under development. We would welcome your suggestions and comments about the Trail. A Fitness Trail sign package is available to Forest Service and cooperating agencies.

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TESTING AND TRAINING FACILITIES—FITNESS TRAIL

There are many kinds of physical fitness testing and training facilities—almost as many as training goals. But for conditioning workers to accomplish hard field tasks, a fitness circuit is best. It conditions heart and lungs and increases muscular strength, endurance, and flexibility.

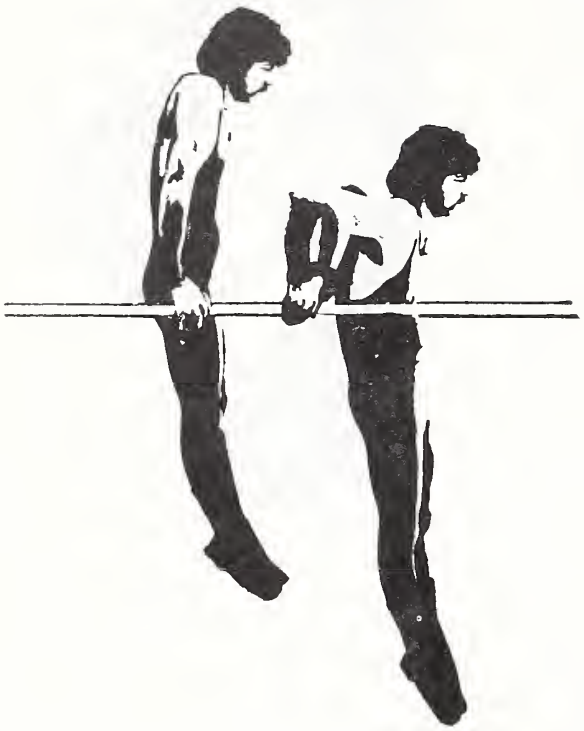
These pages describe the *Fitness Trail*, a circuit designed specifically for forestry field workers. Included are plans for building the *Trail*, construction guidelines, materials lists, and signing information.

ABOUT THE TRAIL

The *Fitness Trail* consists of seven dual-purpose exercise stations along a ¼-mile jogging path. Participants walk or jog between stations, complete the exercise, and continue on until they've finished the course. Signs describe and illustrate each exercise.

The *Trail* can fit on 2 acres of land and costs about $450 in materials to construct. Where space permits, an additional loop for distance running is recommended.

With a small investment in land and dollars, you can build a *Fitness Trail* to meet employee needs, whether for serious training or informal exercise. In some areas, *Trails* could be open to the public, too.



Versatility

The *Fitness Trail* is a versatile testing and training facility. It's ideal for individual or group training. It offers safe, healthful exercise regardless of age or conditioning. Individuals progress at their own rate and do as few or as many repeats of the exercises as they wish. Or they may jog the *Trail*, ignoring the exercises. The *Trail* extends an enjoyable physical challenge that encourages the fitness habit.

Origins of the Trail

The *Fitness Trail* was inspired by the popular Swiss exercise trails, the Vita Parcours. With the financial backing of the Vita Insurance Co., more than 400 parcours (French for track or course) have been built in Switzerland. The idea spread quickly to much of Europe, where most segments of the population are now able to enjoy parcours.

One of the first courses in this country was built at Orofino, Idaho, with the help of Andy Arvish, a Forest Service employee. Another early course was developed by John Burton, also of the Forest Service, while a student at the University of Montana. Today, the President's Council on Physical Fitness and Sports is encouraging construction of Vita Parcours across the U.S.

Features

The *Fitness Trail* was developed after a thorough evaluation of Vita Parcours and other circuit training facilities. Patterns of use and design problems of these courses were evaluated, and their best features retained or modified to better train forestry field workers.

Fitness Trail features include:

- Low cost—inexpensive to build and maintain.
- Dual-purpose exercise stations.
- Training *and* testing.
- Suitable for all ages and fitness levels.
- Can serve as a public recreation feature.
- Provides safe, effective exercise to strengthen muscles and condition heart, lungs, and legs.
- Fits into forest environment with little visual impact.

Training

Training on the *Trail* can take many forms: formal or informal, group or individual.

When organizing a formal fitness program around the *Trail*, emphasize muscular fitness training Monday, Wednesday, and Friday, with individuals performing as many repetitions of each exercise as possible at the stations. To increase progress, they should do a set of exercises, rest, and repeat the set.

Emphasize jogging on Tuesdays and Thursdays. Some jogging should be done after muscular fitness training. Here are some suggested running distances:

Fitness Level	*MWF*	*TuThurs*
Low	1-2 miles	2-3 miles
Medium	2-3	3-5
High	3-4	4-6

The fitness enthusiast may want to take a longer run on the weekend.

Testing to Meet Job Standards

Muscular fitness for job performance standards can be tested at stations 1 (chinup—arm and shoulder strength), 6 (situp—abdominal endurance), 10 (push-up—arm and shoulder endurance), and 14 (pack test—leg strength and agility).

The three-level bench at exercise stations 7 and 14 can be used to train for the 5-minute step test, the physical fitness test Federal resource agencies adopted to screen people for wildland firefighting jobs. The purpose of the test is to make sure those given arduous firefighting tasks can do their jobs safely and well.

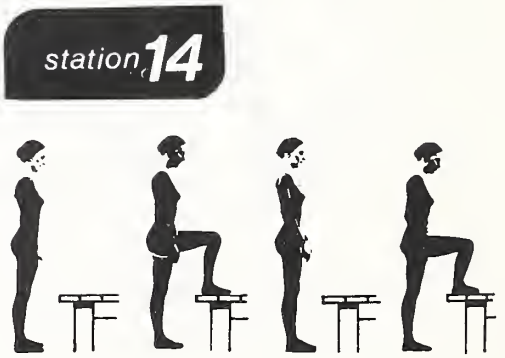
An alternative test, the 1½-mile run, can be administered on the *Trail*.

Self-Testing

Individuals can gage their own fitness by completing the course as quickly as possible doing a specific number of repetitions at each station. Later tests with the same number of repetitions indicate rate of progress. If the *Trail* is near a work unit, employees can assess their fitness often for job standards.

Get the Most From Your Trail

- Publicize *Trail's* opening.
- Develop a brochure and map explaining the *Trail* and distance loop and how to use them.
- Encourage *all* employees to use the *Trail*.
- Use it for testing *and* training.
- Publicize outstanding performances.
- Hold competitions . . . fitness days.
- Invite schools, organizations, and the public to use it.
- Direct campers and other travelers to the *Trail*.



BUILDING THE TRAIL

Selecting Trail Site

In choosing a site, first determine how much sun the area gets, how well the soil drains, and if the area can stand heavy recreational use. The site should be fairly level. Keep esthetics in mind—will this be a pleasant spot to exercise? If possible, have a landscape architect help you select the site and layout the *Trail*.

Location should also depend on who will use the *Trail*. Is it only for employees or for the public too? The *Trail* should be accessible for users. You will probably want to add a distance loop for longer runs, so is the surrounding area suitable? The distance loop should begin and end at the *Trail*, but it can follow established roads and trails for the most part.

Laying Out the Trail

First rough out the *Trail* by pacing off a ¼-mile jogging path. When possible, locate the *Trail* so it passes through varied country such as a meadow and a stand of trees. Keep curves wide so runners can take them at a fast pace. Note locations of exercise stations and make sure terrain is suitable for each station.

Once the *Trail* is paced off, measure the distance for accuracy with a 100-foot tape or other measuring device.

Constructing Jogging Path

First, level and smooth the path as much as possible. Fill low spots and cut humps and uneven high spots. Dig or cut out rocks and roots. You may want to cut a shallow trench for the entire path, which will help keep surfacing materials in place. The path should be at least 5 feet wide so two people can jog side by side comfortably.

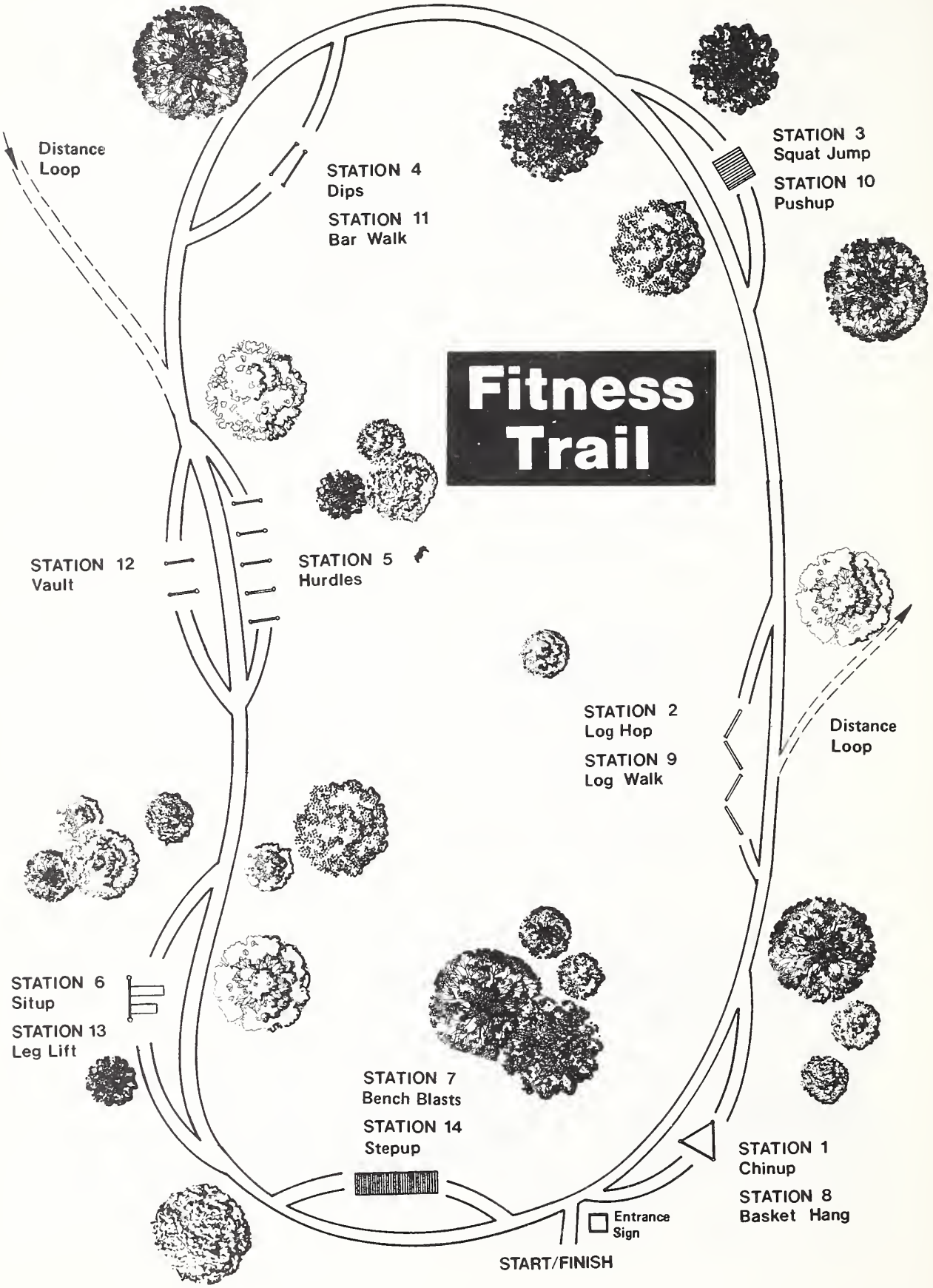
If you are training crews in fireline construction, apply the training to build the jogging path. Where labor is limited, small power tools like the one-man flail (fireline) trencher should prove valuable. Other forest trail-building equipment or small garden rototillers, tractors, or plows could be helpful.

Second, surface the path with wood chips, pea gravel or other native materials that will make a good running surface and keep the path dry and dust-free.

Building Exercise Stations

Refer to the construction guidelines for detailed information on building each exercise station. Place them along the jogging path in the order shown on the *Fitness Trail* map. The sequence has been planned to exercise specific muscle groups in turn and not fatigue any one group excessively.

Exercise stations can be left natural or stained or painted to better blend with the surroundings.

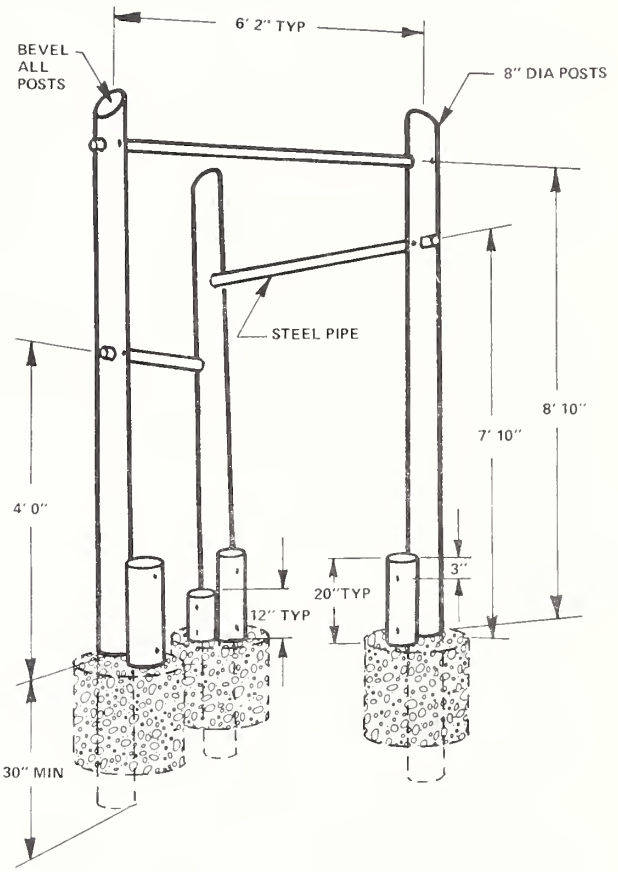

Fitness Trail
Distance Loop
STATION 4
Dips
STATION 11
Bar Walk
STATION 3
Squat Jump
STATION 10
Pushup
STATION 12
Vault
STATION 5
Hurdles
STATION 2
Log Hop
STATION 9
Log Walk
Distance Loop
STATION 6
Situp
STATION 13
Leg Lift
STATION 7
Bench Blasts
STATION 14
Stepup
STATION 1
Chinup
STATION 8
Basket Hang
Entrance Sign
START/FINISH

Station 1/8

CHINUP/BASKET HANG

Materials

3 - 8" dia x 14' Treated Posts
1 - 8" dia x 8' Treated or Untreated Post
3 - 1¼" x 7'0" Schedule 80 (1.66od x .200 wall) Galvanized Steel Pipe
3 - 3/8" dia x 8" Bolts, Nuts, Washers
12 - 3/8" dia x 12" Lag Screws, Washers



Construction Guidelines

1. Lay out triangle with 6-foot 2-inch sides. Each point will be the center of a post hole.

2. Dig holes 30 inches deep.

3. Set posts; backfill hole 6 inches to 8 inches and tamp. Plumb posts.

4. Fill with concrete and check for plumb.

5. After concrete cures (24 hours), cut posts off at a bevel at 9 feet 10 inches.

6. Locate holes for chinup bars.

7. Use a heavy-duty 1/2-inch electric drill, if power is available; first pilot drill pipe holes with a 3/8-inch by 12-inch shank bit.

8. Next drill 1¾-inch holes using a 1¾-inch self-feeding bit with a 12-inch extension.

9. Install pipes. Pipes may have to be driven through the holes with a small striking hammer.

10. At one end of each pipe, drill a 3/8-inch hole through the post and center of the pipe so the bar can be pinned with a 3/8-inch bolt. Countersink both ends of the bolts.

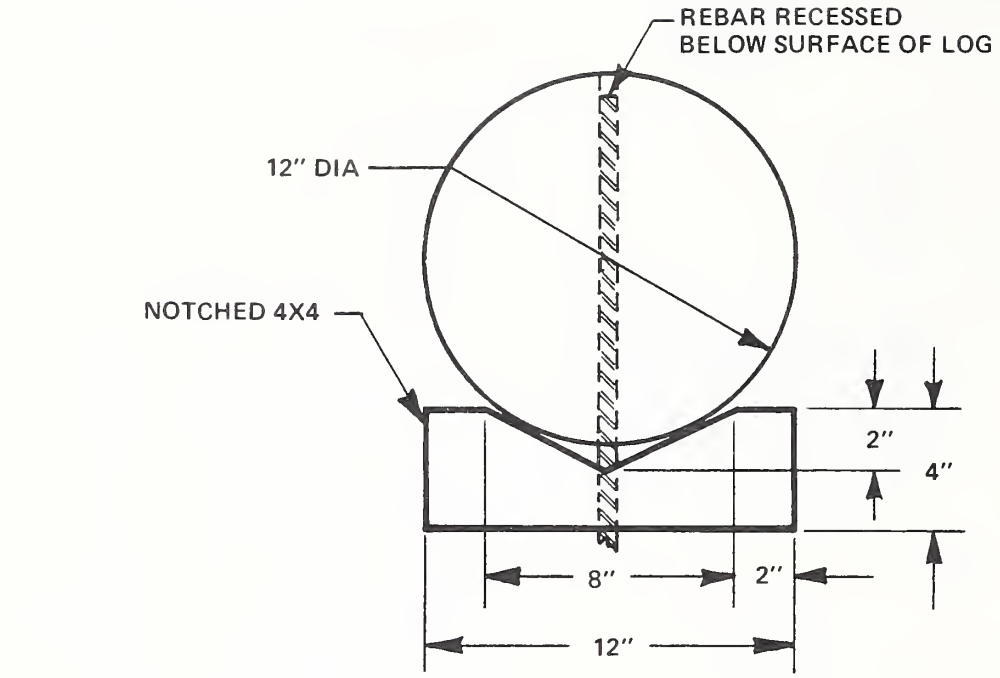
11. Cut three 20-inch and three 12-inch stepping blocks from leftover 8-inch diameter treated or untreated post ends.

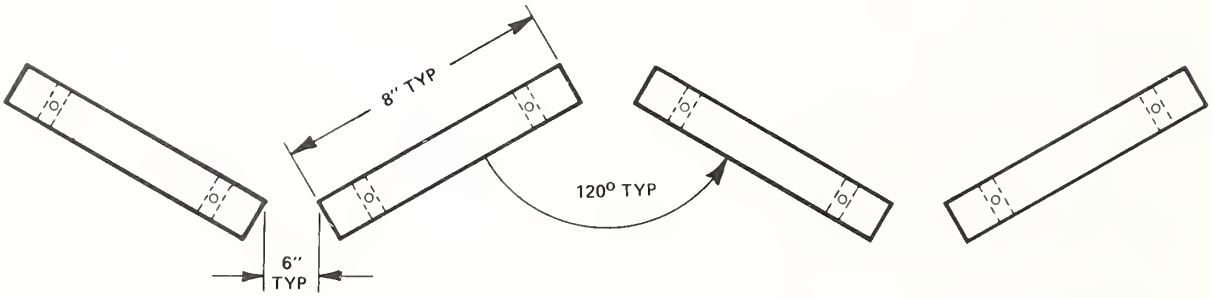
12. Locate and drill 3/8-inch holes through stepping blocks. Countersink with a 1-inch bit.

13. Locate and drill pilot holes in main posts.

14. Bolt steps in place with 3/8-inch by 12-inch lag screws.

Station 2/9





LOG HOP/LOG WALK

Materials

4 - 12" dia x 8' Peeled, Untreated Logs
8 - 1/2" x 30" Concrete Reinforcing Bar
1 - 4" x 4" x 8' Cedar or Redwood Post

Construction Guidelines

1. Lay out eight 1-foot-long blocks on an 8-foot-long 4 by 4. Notch as shown in drawing.

2. Drill a 1/2-inch hole through the center of each 4-inch by 4-inch piece.

3. Drill a 1/2-inch hole about 12 inches from each end of each 8-foot log.

4. Place logs on 4 by 4 pieces and aline holes and logs to proper position.

5. Drive a 30-inch piece of rebar through the holes in the logs and 4 by 4's and into the ground with a sledge hammer. Use a short (6-inch) piece of rebar as a punch to countersink the rebar 1-inch or so below the top surface of the log.

Station 3/10

SQUAT JUMP/ PUSHUP

Materials

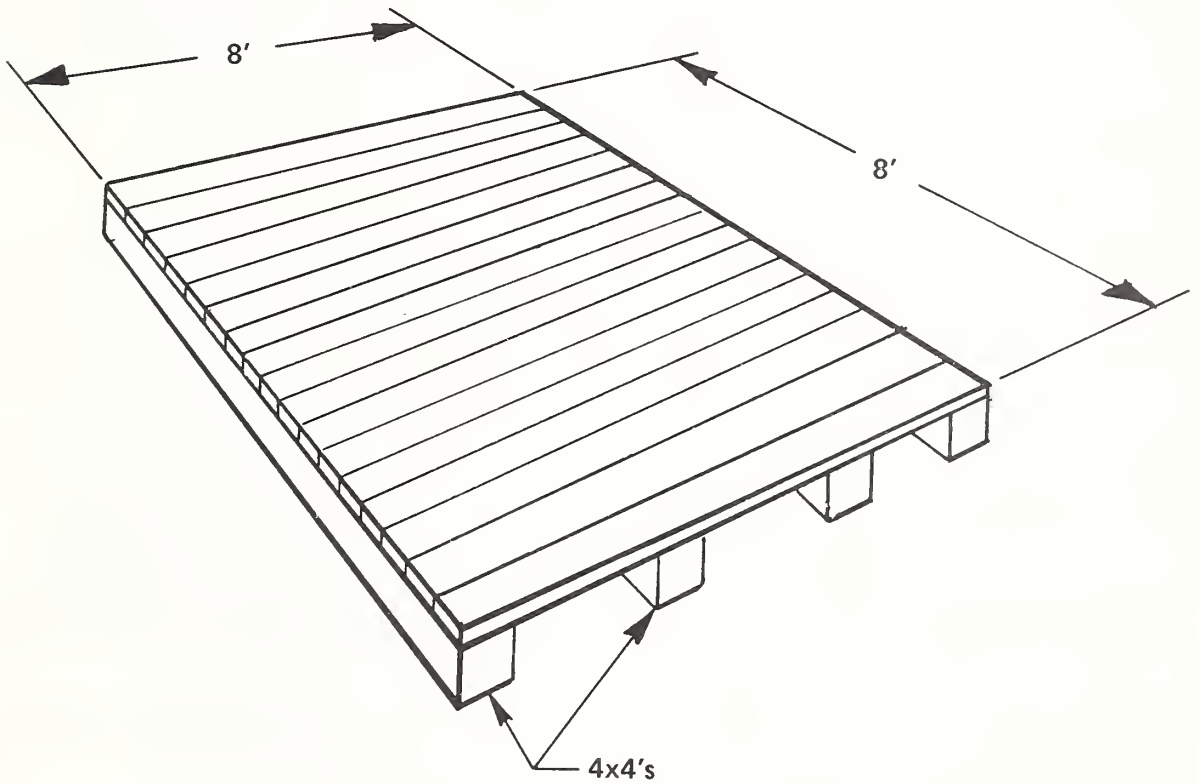
4 - 4" x 4" x 8' Cedar or Redwood Posts
17 - 2" x 6" x 8' Dimension Lumber
2 lb - 16d Nails

Construction Guidelines

1. Pushup station may be constructed onsite or made indoors and taken to site.

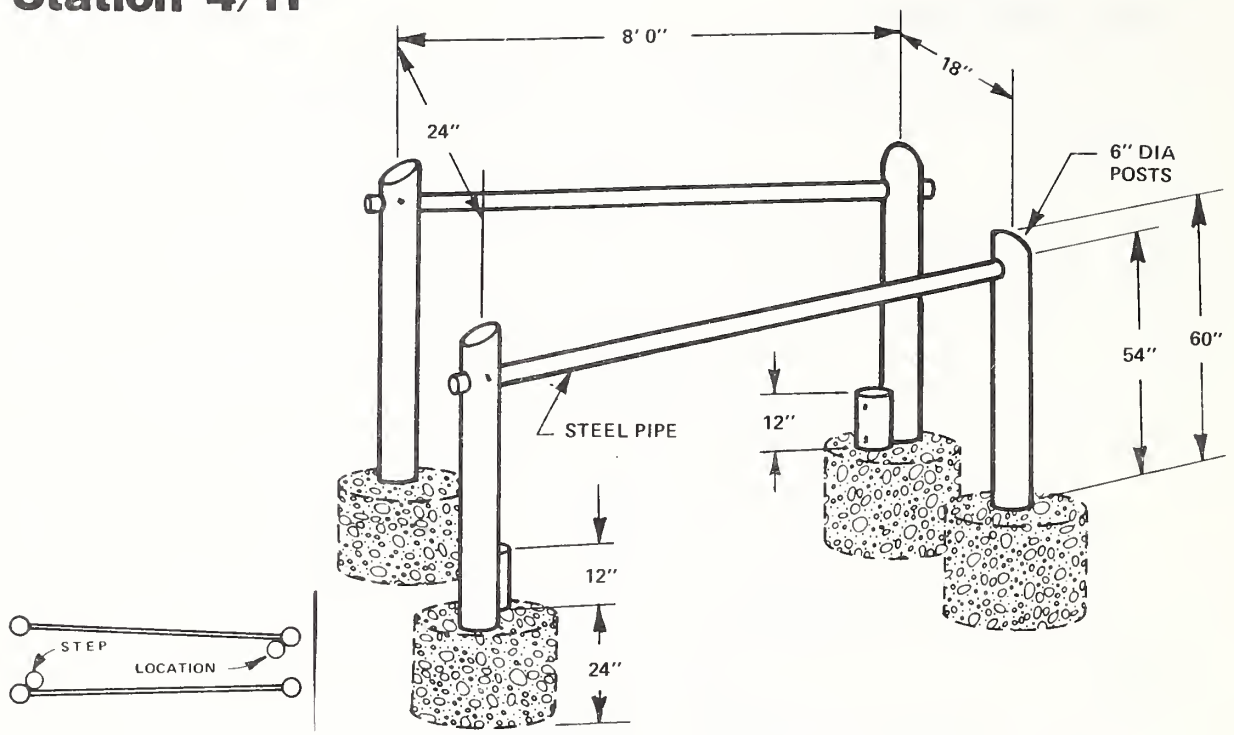
2. Place structure on the ground to check for high or low places.

3. Smooth site so structure will rest on ground without rocking.



SPACE 2x6" PLANKING
1/8" APART FOR DRAINAGE

Station 4/11



DIPS/BAR WALK

Materials

4 - 6" dia x 8' Treated Posts
2 - 1½" x 8'6" Schedule 40 (1.9od x .145 wall) Galvanized Steel Pipe
2 - 3/8" x 6" Bolts, Nuts, Washers
2 - 3/8" x 10" Lag Screws, Washers

Construction Guidelines

1. Measure out hole locations according to drawing specifications.

2. Dig holes 24 inches deep.

3. Set posts; backfill hole 6 inches to 8 inches and tamp. Plumb posts.

4. Fill with concrete and check for plumb.

5. After concrete cures (24 hours), cut posts off at a bevel at 60 inches.

6. Locate holes for crossbars.

7. Use a heavy-duty 1/2-inch electric drill, if power is available; first pilot drill crossbar holes with a 3/8-inch by 10-inch shank bit.

8. Next drill 2-inch holes using a 2-inch self-feeding bit with a 12-inch extension.

9. Install pipes. Pipes may have to be driven through the holes with a small striking hammer.

10. At one end of each pipe, drill a 3/8-inch hole through the post and center of the pipe so the pipe can be pinned with a 3/8-inch bolt. Countersink both ends of the bolts.

11. Use two of the 12-inch pieces that were cut off the upright posts for the steps.

12. Locate and drill 3/8-inch holes through stepping blocks. Countersink with a 1-inch bit.

13. Locate and drill pilot holes in main posts.

14. Bolt steps in place with 3/8-inch by 12-inch lag screws.

Station 5

HURDLES

Materials

10 - 6" dia x 3' Treated Posts
5 - 4" dia x 7' Untreated Rails
10 - 3/8" x 6" Lag Screws, Washers

Construction Guidelines

1. Lay down two parallel string lines 6 feet 6 inches apart.

2. On one string line locate five post hole centers 10 feet apart and dig holes 18 inches deep.

3. Locate the number two post hole on second string line by measuring 11 feet 11 inches diagonally between post holes three and two as shown in drawing. Locate remaining holes on second string line.

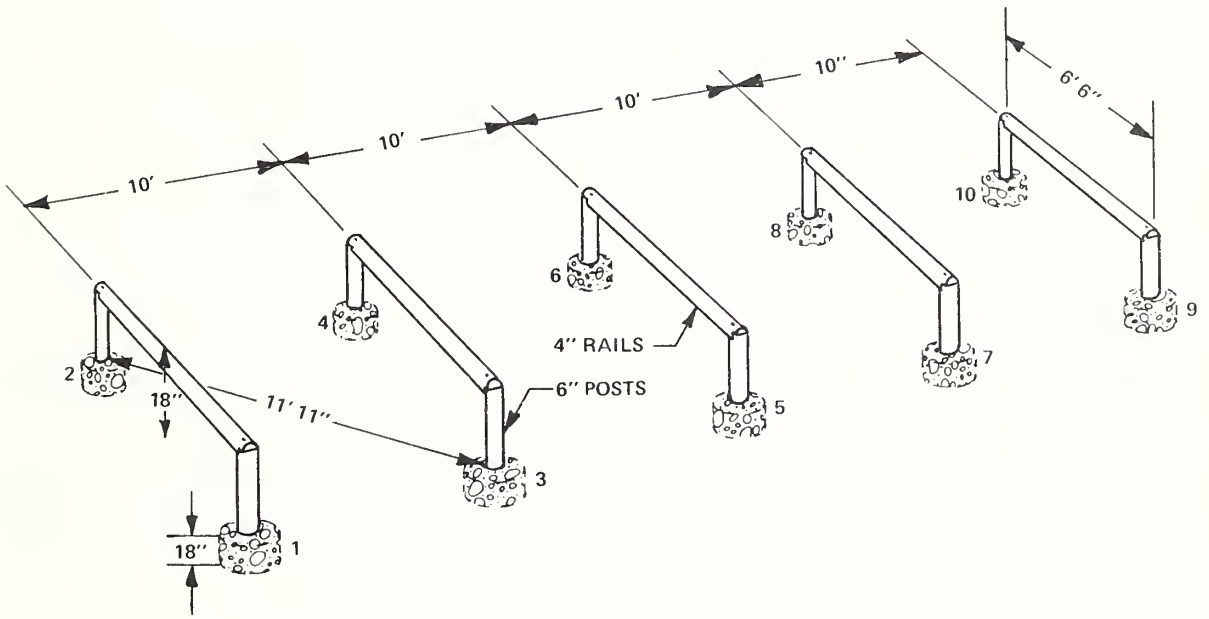
4. Place posts in holes and tamp in 2 or 3 inches of dirt. Pour concrete and plumb posts.

5. After concrete cures (24 hours), measure the distance between posts for each hurdle and cut the notches in each rail accordingly.

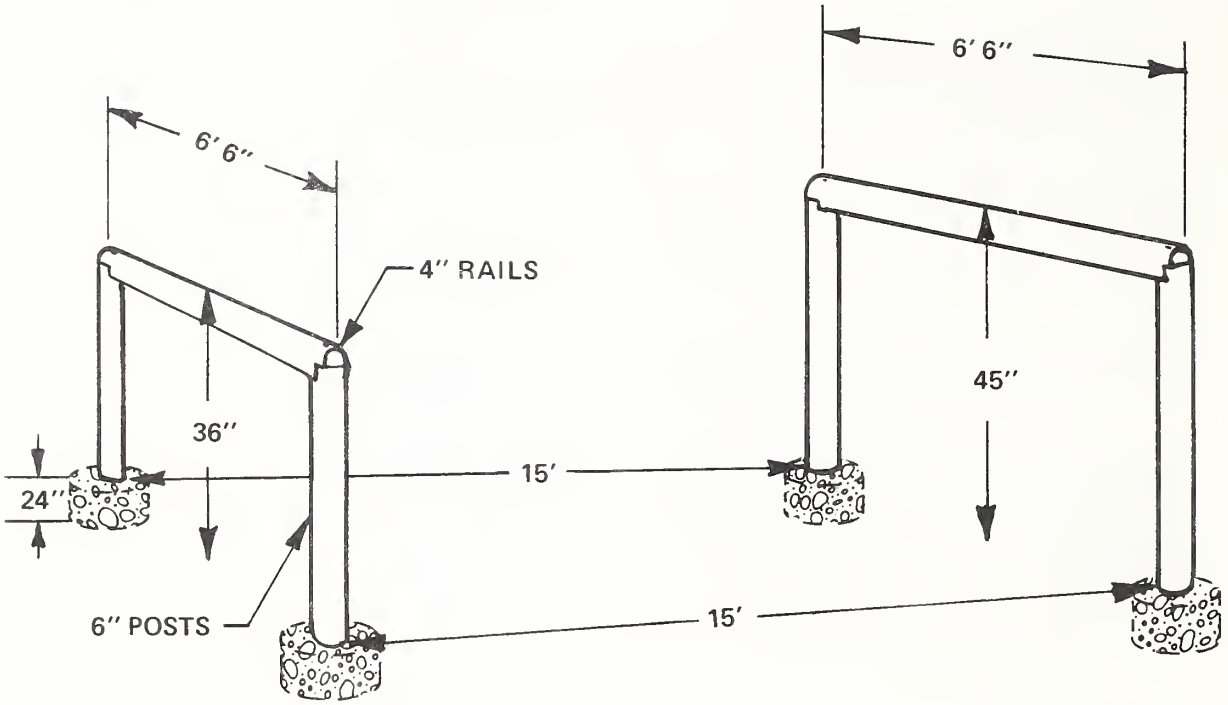
6. Cut off the posts so that when the notched rail is set onto the posts the top of the rail will measure 18 inches from the ground.

7. With all the rails in place, drill a 1/4-inch hole through each end and into the posts about an inch. Countersink the holes with a 1-inch diameter bit deep enough so the heads of the bolts are flush with the top of the rail.

8. Start 3/8-inch by 6-inch lag screws with a few taps from a hammer and screw into place.



Station 12



VAULT

Materials

2 - 6" dia x 6' Treated Posts
2 - 6" dia x 7' Treated Posts
2 - 4" dia x 7' Untreated Rails
4 - 3/8" x 6" Lag Screws, Washers

Construction Guidelines

1. Locate holes and dig them 24 inches deep.

2. Set posts in place and tamp in 2 or 3 inches of dirt around the base of each post.

3. Pour concrete and plumb posts before concrete begins to cure. Allow concrete to cure 24 hours.

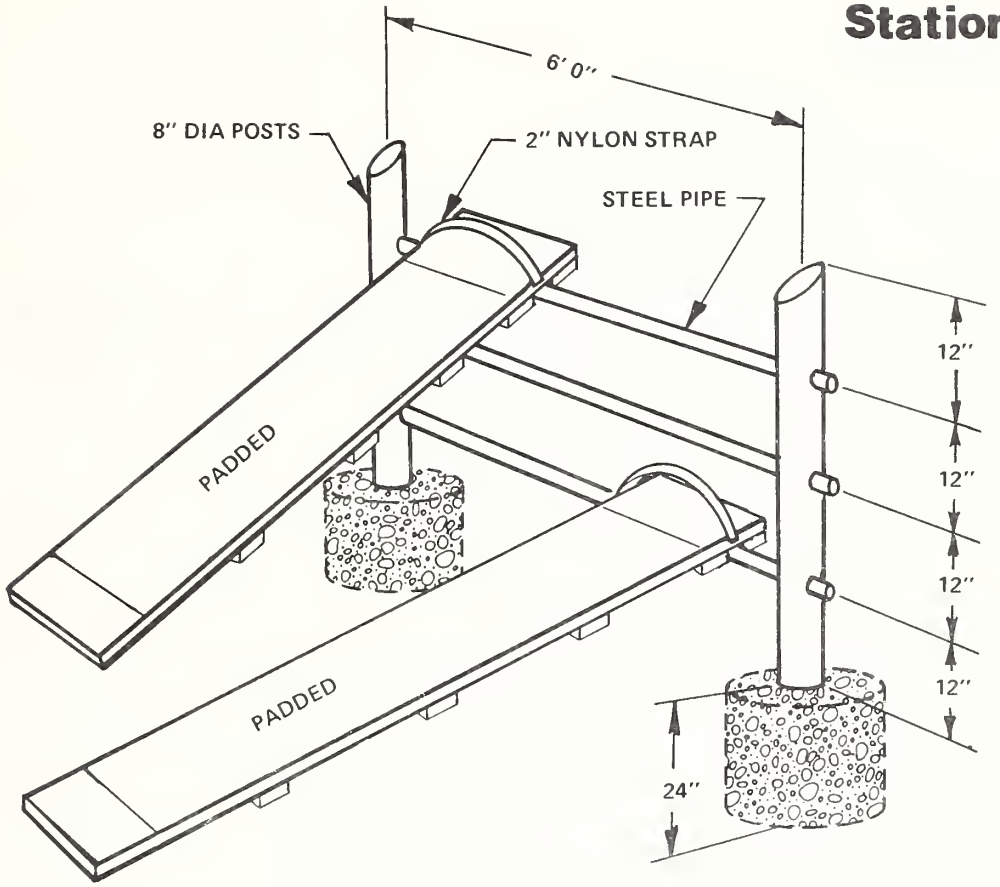
4. Measure the distance between posts for each vault and cut the notches in the rails accordingly.

5. Cut the posts off so when the notched rail is set onto the posts the top of the rail will measure 36 inches for the short vault and 45 inches for the tall vault.

6. With the rail in place, drill a 1/4-inch hole through each end and into the posts about 1 inch. Countersink the holes with a 1-inch diameter bit deep enough so the heads of the bolts are flush with the top of the rail.

7. Start 3/8-inch by 6-inch lag screws with a few taps from a hammer and screw into place.

Station 6/13



SITUP/LEG LIFT

Materials

2 - 8" dia x 6' Treated Posts
3 - 1½" x 6'8" Schedule 40 (1.9od x .145 wall) Galvanized Steel Pipe
4 - 2" x 10" x 8' Dimension Lumber
2 - 2" x 4" x 8' Dimension Lumber
40 - 1/2" x 3" Bolts, Nuts, Washers
2 - 1-3/4" x 48" Nylon Webbing
2 - Steel Adjuster Buckles
2 - 1/2" x 19" x 6'4" Ethafoam Pads

Construction Guidelines

1. Locate post holes 6 feet between centers.

2. Dig holes 24 inches deep.

3. Set posts; backfill hole 6 to 8 inches and tamp. Plumb posts.

4. Fill with concrete and check for plumb.

5. After concrete cures (24 hours), bevel posts at 48 inches.

6. Locate holes for horizontal pipes.

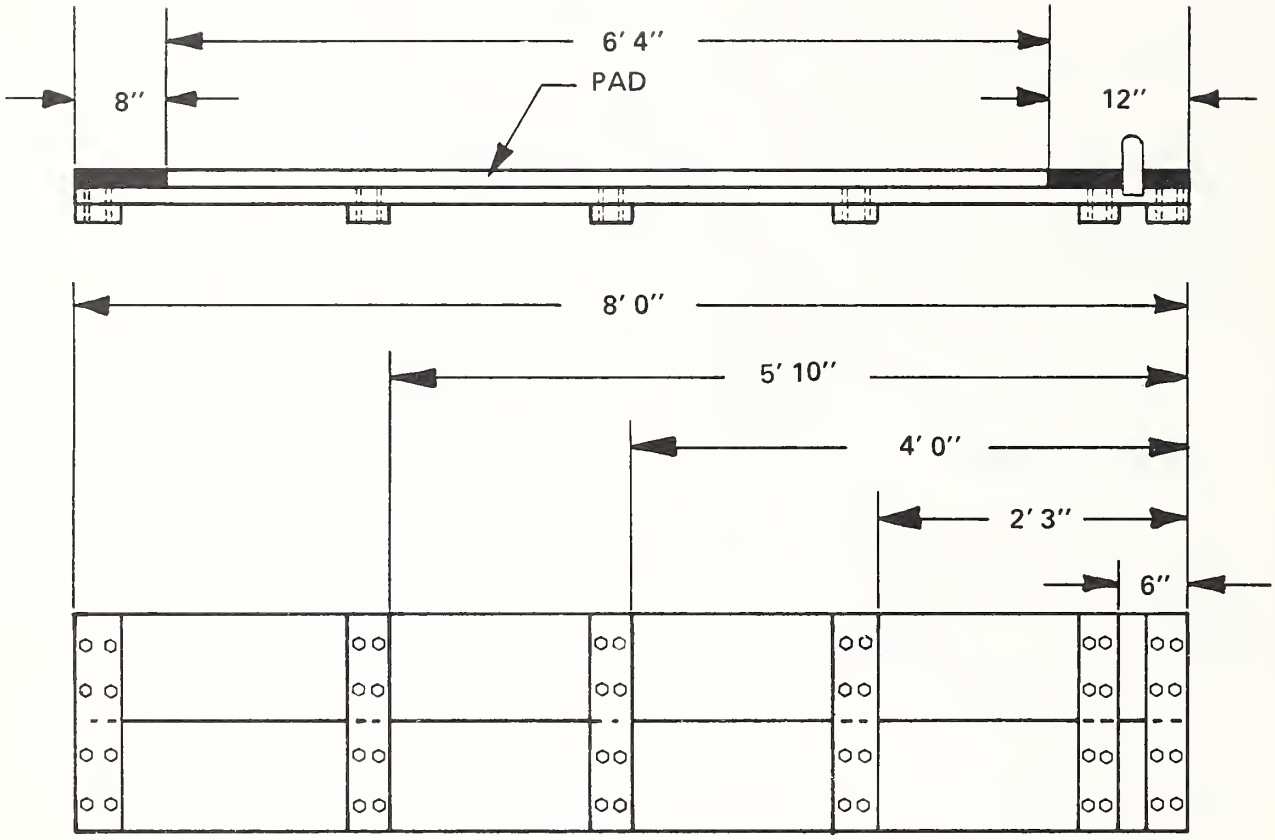
7. Use a heavy-duty 1/2-inch size electric drill, if power is available; first pilot drill horizontal pipe holes with a 3/8-inch by 10-inch shank bit.

8. Next drill 2-inch holes using a 2-inch self-feeding bit with a 12-inch extension.

9. install horizontal pipes. Pipes may have to be driven through the holes with a small striking hammer.

10. At one end of each horizontal pipe, drill a 3/8-inch hole through the post and the center of the pipe so it may be pinned with a 3/8-inch bolt. Countersink both ends of the bolts.

11. Construct situp boards as shown in drawing.



SITUP BOARD CONSTRUCTION

BENCH BLASTS/STEPUP

Materials

3 - 4" x 4" x 8' Cedar or Redwood Posts
2 - 2" x 6" x 10' Dimension Lumber
9 - 2" x 6" x 8' Dimension Lumber
2 lb - 16d Nails
2 - 3/8" x 8" Bolts, Nuts, Washers
6 - 7-5/8" x 7-5/8" x 15-5/8" Concrete Wall Blocks

Construction Guidelines

1. The three-level bench may be constructed onsite according to the drawings, or it may be constructed indoors and taken to the site.

2. Place the bench in location and mark the ground for hole and pad location.

3. Remove bench and dig holes for concrete blocks and posts.

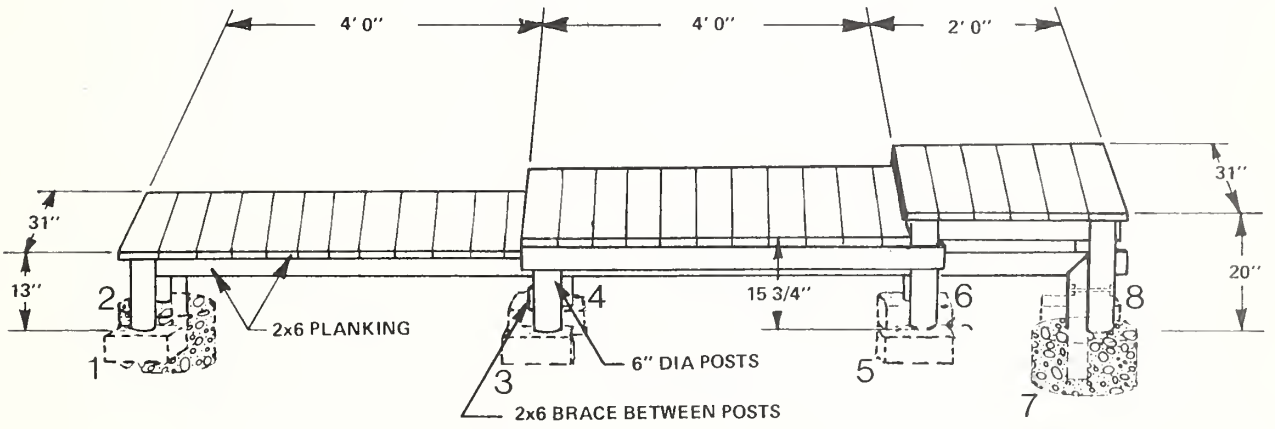
4. Set blocks in holes so that each is level with the other and tamp in dirt to stabilize.

5. Set two 4-inch by 4-inch posts in holes 2 and 7 and pour concrete. Plumb posts.

6. Concrete should be made level with the six concrete blocks and smoothed.

7. After the concrete cures (24 hours), set the bench into place.

8. Bolt the bench to the posts in holes 2 and 7. Countersink the bolts.



Materials List for Exercise Stations

Quantity	Item Description	Est Cost
8	4" x 4" x 8' Cedar or Redwood Posts	$ 28.00
2	2" x 4" x 8' Dimension Lumber	3.50
26	2" x 6" x 8' Dimension Lumber	71.00
2	2" x 6" x 10' Dimension Lumber	7.00
4	2" x 10" x 8' Dimension Lumber	19.00
7	4" dia x 7' Untreated Rails	7.00
2	6" dia x 6' Treated Posts	3.00
4	6" dia x 8' Treated Posts	9.60
2	6" dia x 7' Treated Posts	3.60
10	6" dia x 3' Treated Posts	7.50
3	8" dia x 14' Treated Posts	21.30
2	8" dia x 6' Treated Posts	7.20
1	8" dia x 8' Treated or Untreated Post	3.60
4	12" dia Peeled Untreated Logs	12.00
3	1¼" x 7'0" Schedule 80 (1.66od x .200 wall) Galvanized Steel Pipe	17.00
2	1½" x 8'6" Schedule 40 (1.9od x .145 wall) Galvanized Steel Pipe	20.00
3	1½" x 6'8" Schedule 40 (1.9od x .145 wall) Galvanized Steel Pipe	21.00
4 lb	16 Penny Nails	2.00
5	3/8" x 8" Bolts, Nuts, Washers	1.80
14	3/8" x 6" Lag Screws, Washers	4.20
2	3/8" x 10" Lag Screws, Washers	1.60
40	1/2" x 3" Bolts, Nuts, Washers	8.00
12	3/8" x 12" Lag Screws, Washers	10.00
2	3/8" x 6" Bolts, Nuts, Washers	.40
2	1-3/4" x 48" Nylon Webbing	1.00
2	½" x 19" x 6'4" Ethafoam Pads	2.00
2	Steel Adjuster Buckles for 1-3/4" Webbing	1.00
8	½" x 30" Concrete Reinforcing Bar	2.20
6	Standard Concrete Wall Blocks (7-5/8" x 7-5/8" x 15-5/8")	4.00
4 gal	Paint or Stain	20.00
2 yd	Concrete (mixed)	70.00
	Total	$389.50

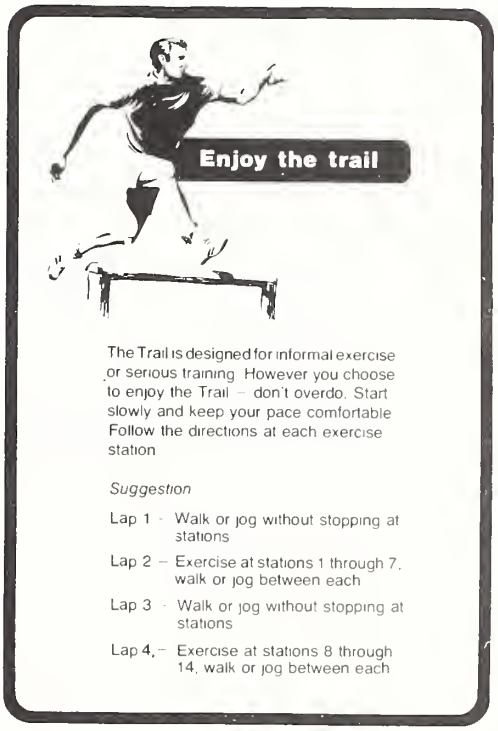
SIGNING THE TRAIL

Signs are an important part of the *Trail*. Some explain the purposes of the *Trail*. Others describe the exercises so they can be performed properly. Signs help assure a safe, enjoyable recreational experience.

The Equipment Development Center at Missoula has designed a sign package for the *Fitness Trail*.

The package consists of four signs at the *Trail* entrance:

1



2

Warmup

Before the Trail...

A 4- or 5-minute warmup prepares your body for exercise. Begin with easy stretching ..then move to more vigorous calisthenics. Pay attention to:

- Stretching lower back.
- Stretching hamstrings and calf muscles.
- Increasing exercise tempo gradually.

Suggested Warmups

Wall Stretch (calves and tendons)

Stride Stretch (groin)

Flexed Leg-Back Stretch (legs and back)

Standing Toe Touch (hamstrings)

Jumping Jacks (legs and trunk)

Squat Thrust (legs and trunk)

3

Cooldown

After the Trail.

A gradual cooldown is vital to avoid sore muscles. Walk or jog slowly after completing exercise to continue the pumping action of muscles, promote circulation, and speed recovery. A few minutes of leg stretching also helps prevent soreness

4

Signs for the seven dual-purpose exercise stations:

station 1

Chinup

Pull up till chin is over bar.
Return to hanging position.

Beginner	10*
Intermediate	3-6
Advanced	7+

* feet on ground.

station 8

Basket Hang

Raise legs into "basket" and return.

Beginner	3
Intermediate	6
Advanced	12+

station 2

Log Hop

Face length of log. Hop sideways across log; repeat hop back across log.

Beginner	5 hops
Intermediate	10 hops
Advanced	20 hops

station 9

Log Walk

Walk length of logs:

Start over if you drop off.

station 3

Squat Jump

Squat until legs at 90-degree angle; jump high. Switch position of feet on way down and jump again.

Beginner	5 each leg
Intermediate	10 each leg
Advanced	15+ each leg

station 10

Pushup

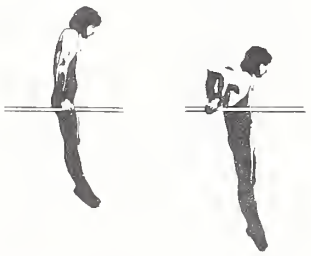
With hands outside shoulders, push up keeping back straight. Return until chest almost touches deck.

Beginner	15*
Intermediate	20
Advanced	40+

station 4

Dips

Grasp bars. Support weight on arms, lower body and return.



Beginner	1
Intermediate	5
Advanced	15+

station 11

Bar Walk

Supporting weight on arms, hand walk length of bars or as far as possible.

station 5

Hurdles

station 12

Vault

Vault bar of choice.

station 6 — Situp

Curl up to sitting position and touch right elbow to left knee and return. Repeat, alternating right and left elbow touch.

Repetitions with board on lowest bar:

Beginner	10
Intermediate	30
Advanced	50+*

*Raise board to increase resistance

station 13 — Leg Lift

Lift legs slowly to 90-degree angle; slowly return; repeat.

Repetitions with board on lowest bar:

Beginner	5
Intermediate	10
Advanced	20+*

*Raise board to increase resistance

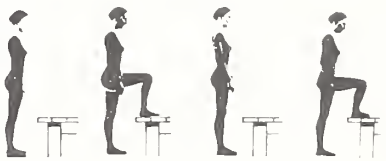
station 7 — Bench Blasts

With right foot on bench, blast off. Switch position of feet on way down. (Women use low bench, men medium bench. For added resistance use higher bench.)

Beginner	5
Intermediate	10
Advanced	15+

station 14 — Stepup

Step up and down on bench as fast as possible: do indicated number, then change lead leg. (Women use low bench, men medium bench. For added resistance use higher bench.)



Beginner	10 each leg
Intermediate	20 each leg
Advanced	30 each leg

And directional signs:

Signs are silk-screened with brown ink on white .020 polystyrene. They are ready for mounting on the sign boards shown in the drawings. The signs can be bonded to the boards with any waterproof construction or panel adhesive compatible with polystyrene.

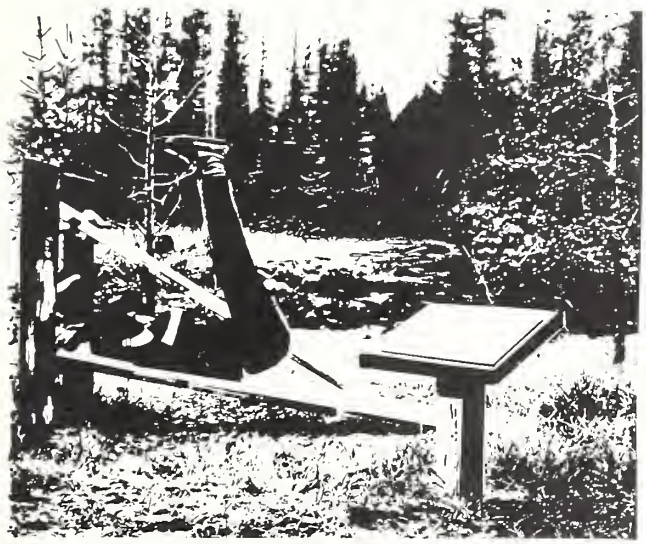
If you are interested in obtaining a sign package, contact the Missoula Center.

Constructing Sign Mounts

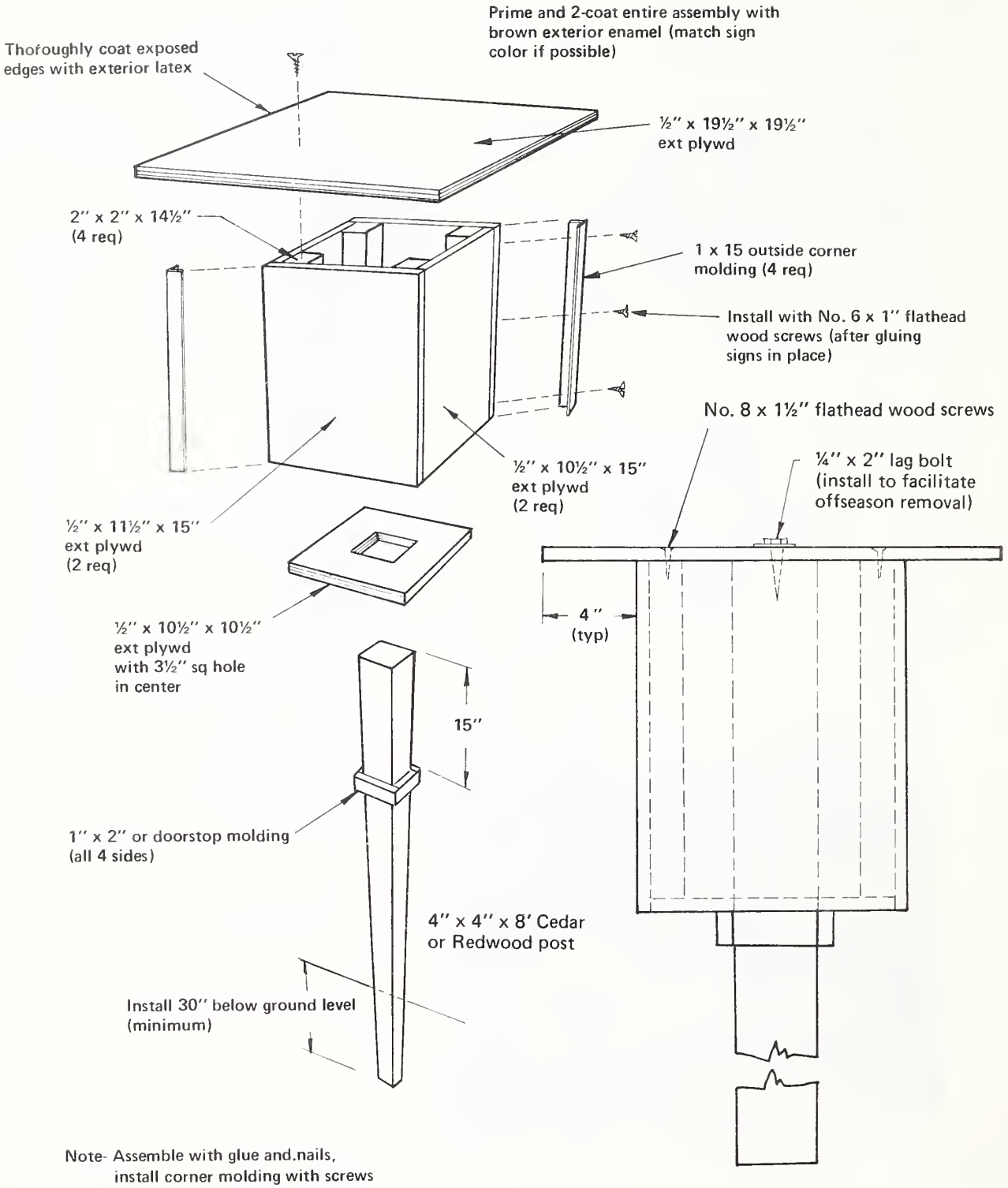
Sign mounts are designed so the signs can be easily removed in the off season to prolong their life.

Locate signs near appropriate stations so they can be readily seen from the *Trail*. Make sure the signs don't compromise safe use of the stations. Locate the four-sided entrance sign far enough off the *Trail* so there is ample room for a number of people to read the information and warm up without interfering with those already on the *Trail*.

Exposure to direct sunlight shortens the life of the polystyrene signs. Position the signs to minimize exposure to the sun, or, if possible, locate the mounts in the shade.



ENTRANCE SIGN BOX DETAILS



Note- Assemble with glue and nails, install corner molding with screws

Construction Guidelines

1. Construct sign box as illustrated. Do NOT install corner molding.

2. Prime and paint box and corner moldings (unassembled) with exterior primer and exterior brown enamel (match sign color if possible).

3. Center signs on box so molding overlaps sign edges evenly. Bond signs to box with adhesive compatible with polystyrene. (See illustration for sign sequence.)

4. Screw corner moldings in place.

5. Dig post hole approximately 30 inches deep.

6. Glue and nail sign box stops onto 4" x 4" x 8' cedar post.

7. Set post in ground with one side perpendicular to trail entrance. Tamp securely in place.

8. Bolt sign box to post with sign 1 facing entrance.

NOTE: Sign box is designed for easy removal for off-season storage.

Materials

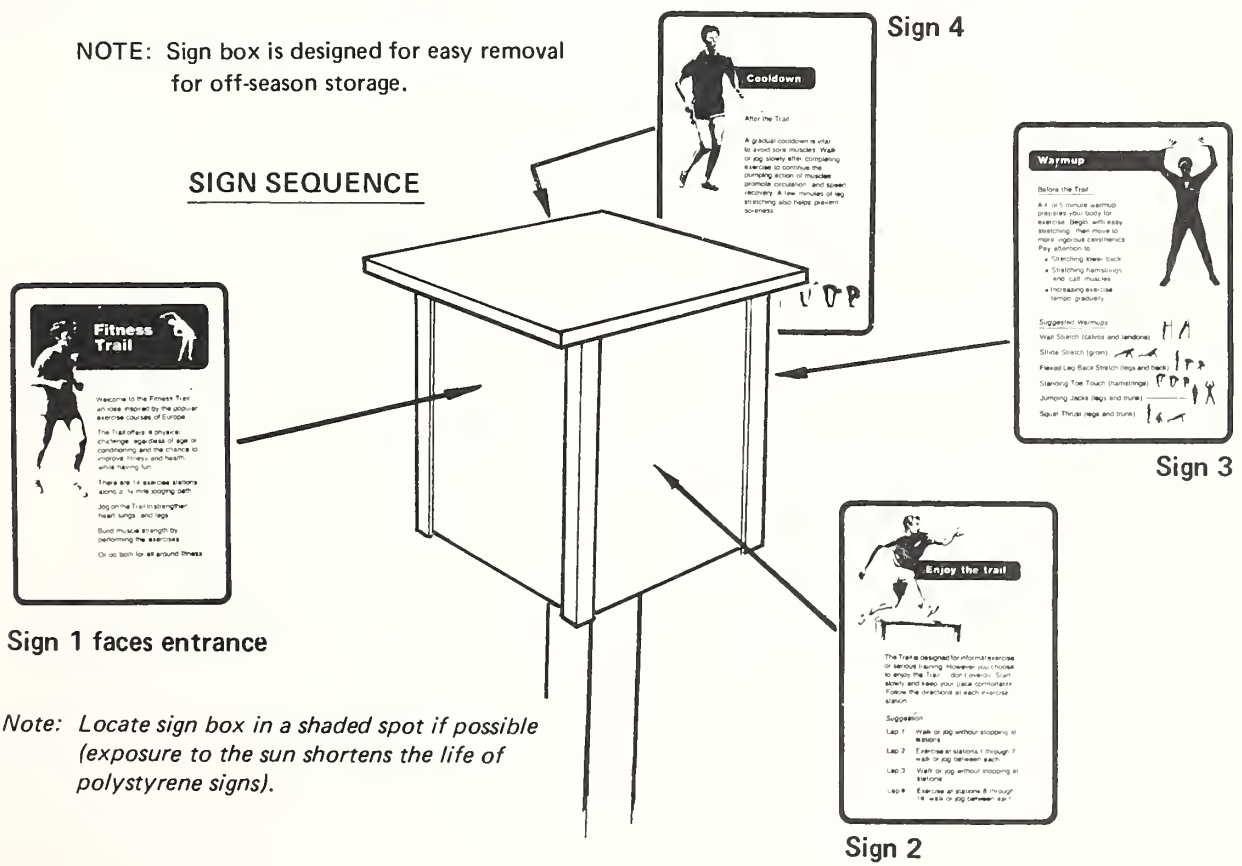
1	-	4" x 4" x 8' Cedar or Redwood Post
24	-	No. 6 x 1" Flathead Wood Screws
4	-	No. 8 x 1½" Flathead Wood Screws
½ lb		8d Finish Nails
		Wood Glue
		Polystyrene Glue
1	-	¼" x 2" Lag Bolt
1	-	¼" Fender Washer
4	-	2" x 2" x 14½"
		1" x 2" or Doorstop Molding (no. as req)

½" Exterior Plywood:

1	-	19½" x 19½"
2	-	10½" x 15"
2	-	11½" x 15"
1	-	10½" x 10½"

½ pt	-	Exterior Latex (color optional)
2 pt	-	Exterior Oil Primer
2 pt	-	Exterior Brown Enamel (oil base)

SIGN SEQUENCE



Sign 4

Sign 3

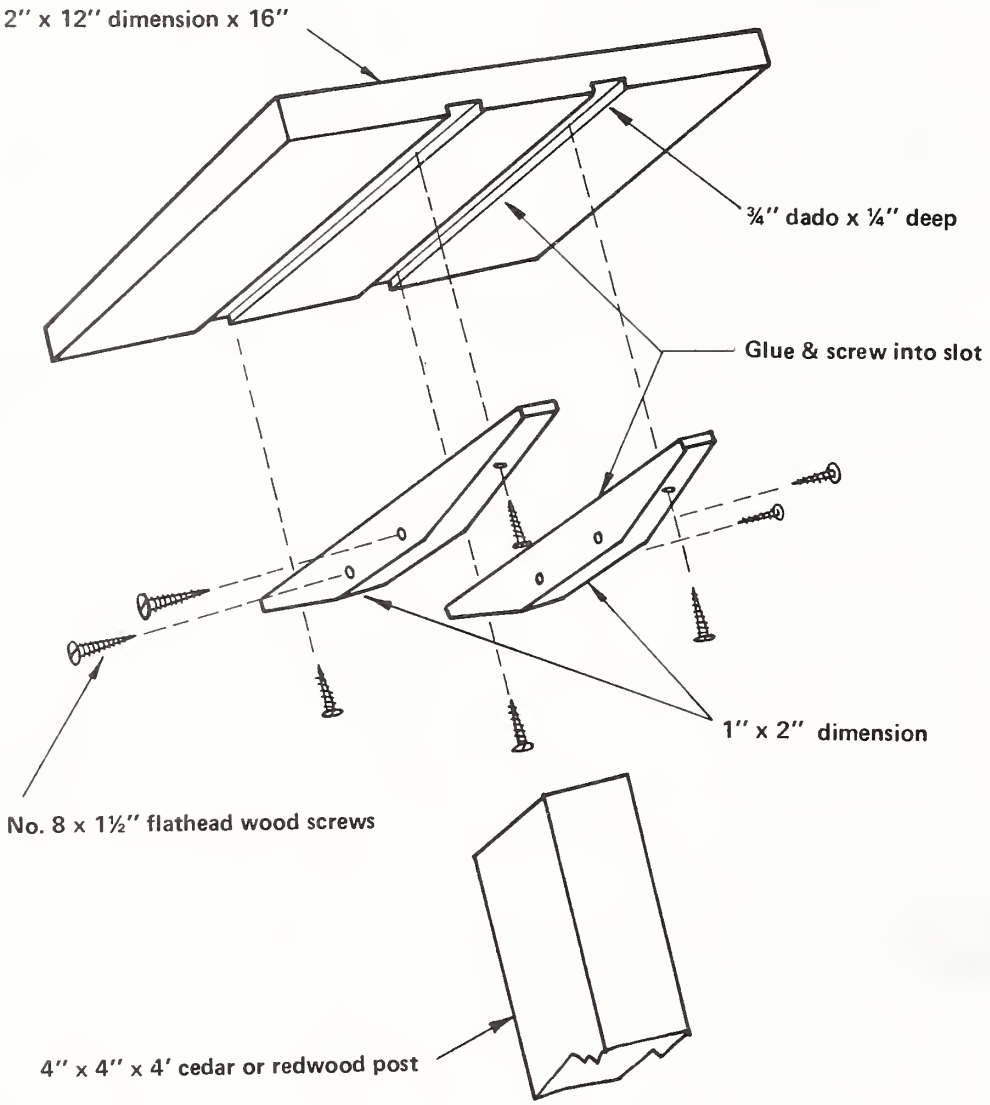
Sign 1 faces entrance

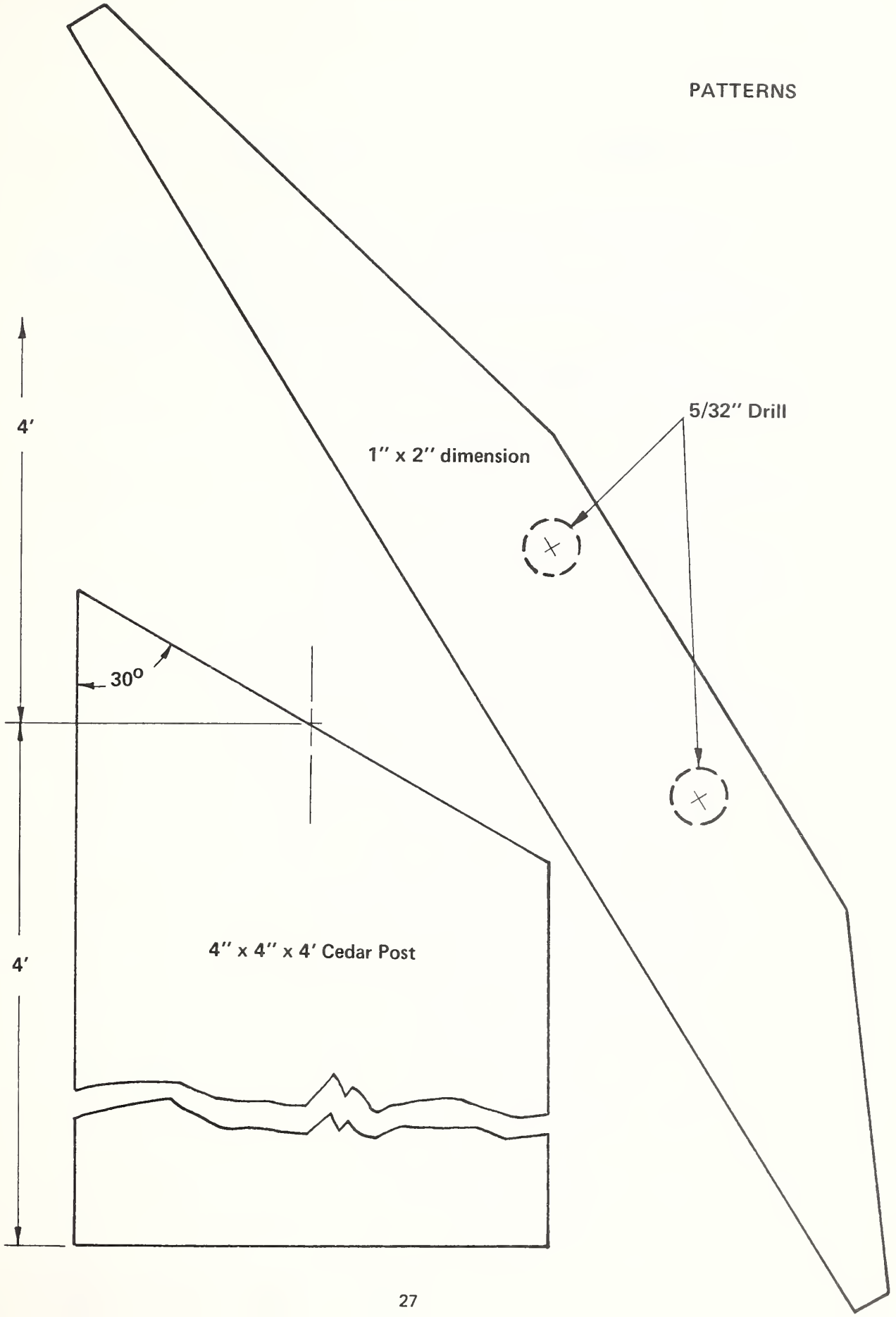
Sign 2

Note: Locate sign box in a shaded spot if possible (exposure to the sun shortens the life of polystyrene signs).

STATION SIGN MOUNT DETAILS

Prime and 2-coat entire assembly with brown exterior enamel (match sign color if possible)





Clip and Use for Patterns

Construction Guidelines

1. Cut 2" x 12" dimension 16" long.

2. Dado two slots ¾" x ¼" deep center on 2" x 12" board with 3½" space between slots (width of post).

3. Using furnished patterns, cut 1" x 2" dimension and drill screw holes with 5/32" bit.

4. Glue and screw 1" x 2" into slots.

5. Prime and paint assembly with brown enamel (match sign color, if possible).

6. Bond signs to 2" x 12" with adhesive compatible with polystyrene. Nail pins or screws can be used with the glue.

7. Cut 4" x 4" x 4' post at 30^{o} angle.

8. Dig post hole 18" to 24" deep. Locate sign to avoid sun (sign should face north, if possible, as exposure to the sun shortens the life of polystyrene signs).

9. Screw sign assembly to post.

Materials

7 - 2" x 12" x 16"
14 - 1" x 2" (cut as per pattern)
56 - No. 8 x 1½" Flathead Wood Screws
7 - 4" x 4" x 4' Cedar or Redwood Posts
1 pt - Exterior Oil Primer
2 pt - Exterior Brown Enamel (oil base)
Wood Glue

Materials List for Sign Mounts

Quantity	Item Description	Est Cost
5	4" x 4" x 8' Cedar or Redwood Posts	$17.50
1	2" x 12" x 10' Dimension Lumber	10.00
1	½" x 4' x 8' Exterior Plywood	12.00
2	1" x 2" x 8' Dimension Lumber	2.00
1	1" x 1" x 6" Outside Corner Molding	1.50
24	No. 6 x 1" Flathead Wood Screws	2.75
60	No. 8 x 1½" Flathead Wood Screws	3.00
1	¼" x 2" Lag Bolt	.20
1	¼" Fender Washer	.05
½ lb	8d Finish Nails	1.00
½ pt	Exterior Latex	1.25
1 qt	Exterior Oil Primer	3.50
2 qt	Brown Exterior Enamel (oil base)	8.00
	Wood Glue	2.50
	Glue (compatible with polystyrene)	3.50
	Total	$68.75

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